oligomer molecules. Maybe such mobility melting is sufficient for liberating the reaction from diffusion control. The effect is manifested by considerable, 20 fold increase (for 70 vol.% of polymer grains) in reactivity as compared to the minimum value, or a 2·7 fold increase as compared to the reactivity of free TGM-3 oligomer.

Translated by D. DOSKOČILOVÁ

REFERENCES

1. **A. A. BERLIN, G. V. KOROLEV, T. Ya. KEFELI** and **Yu. M. SIVERGIN,** Akrilovye oligomery i materialy na ikh osnove (Acrylic Oligomers and Materials on Their Basis). p. 232, Moscow, 1983
2. **Yu. S. LIPATOV.** Mezhfaznye yavleniya v polimerakh (Interphase Effects in Polymers). p. 260, Kiev, 1980
3. **I. S. BAIDIN** and **I. V. GOLIKOV,** Cherkassy, p. 9, 1986. Deposited at ONIITEKhim. 26.02.86, No. 312–XII
4. **A. A. BERLIN, T. Ya. KEFELI** and **G. V. KOROLEV.** Poliefirakrilaty (Polyetheracrylates). p. 54, Moscow, 1967
5. **T. FARRAR** and **E. BECKER.** Impul'snaya i fur'e-spektroskopiya YaMR (Pulse and Fourier Transform NMR). pp. 43, 86, Moscow, 1973
6. **F. W. WEHRLI** and **T. WIRTLIN,** Interpretation of ^{13}C NMR Spectra, p. 188, N.Y.–L., 1976
7. **G. C. LEVI** and **G. L. NELSON,** Rukovodstvo po YaMR ^{13}C dlya khimikov organikov (Carbon 13 Nuclear Magnetic Resonance for Organic Chemists). p. 230, Moscow, 1975
8. **B. R. SMIRNOV, I. V. GOLIKOV, G. V. KOROLEV, Yu. Ye. SHAPIRO, I. V. SHUTOVA** and **V. D. SUKHOV,** Vysokomol. soyed. **A19:** 735, 1977 (Translated in Polymer Sci. U.S.S.R. **19:** 4, 850, 1977)

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SELF-DIFFUSION AND GELATION IN BENZYL ALCOHOL SOLUTIONS OF CELLULOSE TRIACETATE*

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Specific features of self-diffusion and gelation in benzyl alcohol solutions of cellulose triacetate were studied by pulsed magnetic field gradient NMR. The self-diffusion coefficient of the polymer exhibits an anomalous temperature dependence during gelation. The existence

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